

COMPARATIVE SUSTAINABILITY OF BAZAAR IN IRANIAN TRADITIONAL CITIES: CASE STUDIES IN ISFAHAN AND TABRIZ

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Abstract- Bazaar is a traditional public space in the Iranian cities, and always a great section of commercial activities in urban life. Bazaar is not only the commercial centre of traditional cities in Iran but also the centre of social, cultural, political and religious activities. Sustainability of bazaar in Iranian traditional cities seeks to find solutions concerning the effects of city development on cultural heritage and urban element of the city. The main aim of this study is to explain the differences of the social and economical and environmental role of the bazaar in the historical Iranian cities. The case studies are the city of Isfahan and Tabriz in the center and North West of Iran. The main approach of this study is based on qualitative and quantitative data as well as qualitative observations of bodies in charge of urban elements of the Iranian traditional cities in four categories of 1- Mosque (Friday and daily), 2- Citadel, 3- Residential Quarters, 4- Bazaar, and quantitative value for compare bazaar sustainability in Isfahan and Tabriz which including socio-economic-environment aspect within the framework of the Iranian traditional cities.

Keywords: Traditional Cities, Sustainability, Bazaar, Morphology, Iranian Cities.

I. INTRODUCTION

Every society has its own space of activities [1]. In most of the historic cities of Iran, the bazaar play the important role in the city fabric, and all the other complexes are in social and physical relation to this route. In the Iranian cities the bazaar losing its traditional character of multi activities such as market religious and socio cultural fabric and various urban development. Usually in Iranian city, the bazaar started from one of the city gates, and continues in one of the other gates in another side of the city.

Different public buildings such as mosques, inner-city caravanserai, Madrasahs (schools), and Hammams (bath houses) as well as the residential neighborhoods form along the bazaar. In fact, the complex of bazaar route and its adjoining elements is the main design structure of the historic Iranian cities in many cases [2].

It spreads inside the city, extends its branches, each of which forms a separate neighborhood, and usually leads to the main mosque of the city, Masjid Jameh (Friday Mosque). Most of the social communications and public activities of the city take place along the bazaar and its branches.

It is the main communication route while all the economic transactions as well as other social activities could take place there, too [3]. The bazaar traditionally begins at the palace area, which symbolize the spiritual head of the body and when the bazaar grows, body structure of the city evolves. So, the history of bazaar and urbanization are interrelated to each other and in fact, no city can be imagined without bazaar [4].

II. THE FIRST CASE STUDY: ISFAHAN

Isfahan city (Figure 1) is located in 32° 38' 30" N latitude and 51° 38' 40" E longitude. The minimum height is 1550 m around Zayandeh Rood and maximum is 2232 m in Sofeh Mountains. Annual average precipitation and temperature is 121.1 mm and 16.2°C, respectively. Isfahan is the capital city of Isfahan province and the third biggest city in population in Iran after Tehran and Mashhad, and one of Iran metropolis [5]. History of Isfahan city core consisted of two parts, the old section, which started from the old square, close to the Friday mosque, and the new section, which started from Naghsh-e-Jahan square (World View Square) today called as the Meydane Emam, with its measurements of 1680x523 ft and connected to the old section [25-27].

By the 11th century, after selecting Isfahan as the capital of Saljuqi period, the old square had become the center of the city and old square become such an important urban space, that is a big difference in that particular era. It had a castle, bazaar (Figure 2), and mosque and residential. There were some peripheral markets along the main streets radiating from the old square from at least that time. The 1.5 km (1,650 yard) shopping street is still the main street in the bazaar, the longest vaulted bazaar street in the world [6]. After selecting Isfahan as the seat of Shah Abbas Safavi, a new core was designed between the old bazaar and the square.

Creation of Naghshe-e-Jahan square played an important role in Isfahan's town planning. The important point is the best design for connecting of this new square with the old structure of the city core. The purpose of design was linking it with the main chain of the grand bazaar, which extends from the Old Square [7]. Shah Abbas redeveloped the city extensively and had a number of new bazaars built: the buildings surrounding the Naghshe-e-Jahan square (originally including a large number of coffee houses), to the south east and the large bazaar to the north, where the old core was located [8].

III. THE SECOND CASE STUDY: TABRIZ

Tabriz city (Figure 1), the capital of East Azarbaijan Province, lies $46^{\circ} 17' E$ and $38^{\circ} 5' N$ with an altitude of about 1340 meters above sea level. According to the last census of Iranian Statistics Center in 2006, Tabriz city has a population of more than 1,398,060 and the largest Turkish speaking city in Iran [9]. Tabriz from the south is limited to the snowy range of Sahand and from the north to the red mountain of Ovn- Ebn-Ali (Einali). The Ajichai River (Talkheh Rood River) passes from the north and northwest of Tabriz and the Mehran Rood River goes through the middle of it [10]. The area around Jameh Mosque and the old bazaar of Tabriz (Figure 3) and its surroundings seem to have a specific importance after Islam and in the Islamic early centuries, and were the center of residence and the heart of the city.

This shows the geographical superior situation and the centrality of the Mehran Rood River, as far as after three thousand years where the place of residence of the ancient people has retained its importance and has not lost its centrality, since the present political (general governors, governorship, police), commercial (bazaar), economic, religious and cultural (Jameh Mosque and various mosques) centers are focused on this point. Moreover, at the Qajar era, it was the residence place of princes, successors, merchants, scholars and the nobles [11]. Tabriz was a small village, which was then gradually developed into a large city. Different thinkers, historians and travelers described Tabriz, and in the 17th century, [12] Sharden 1965 states that "in the whole world, I do not know a city which new writers have discussed so much about its structure, formation and early name" [13]. The bazaar of Tabriz dates back to the early periods of Iranian urbanism after Islam. The bazaar faced many recession and growth periods and was destroyed several times. What is remaining today from the bazaar is a memento of the Qajar era, which is most likely that the main passages in the bazaar are reconstructed exactly as the past after a destructive and violent earthquake in 1780 [14]. Since it was located on Silk Road route, Tabriz was one of the most important commercial centers in Iran and in the world in past times. It was the center of exchanging European commodities and therefore, was famous in the world [11].



Figure 1. Location of Isfahan and Tabriz cities

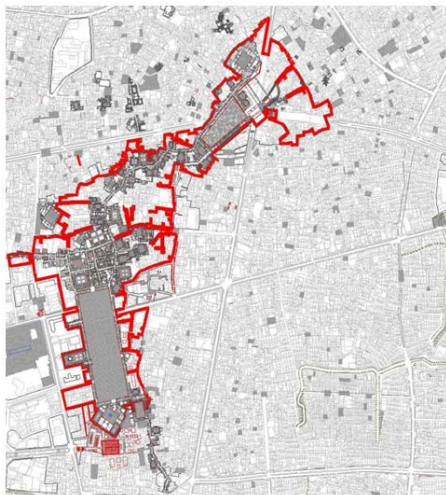


Figure 2. Bazaar of Isfahan

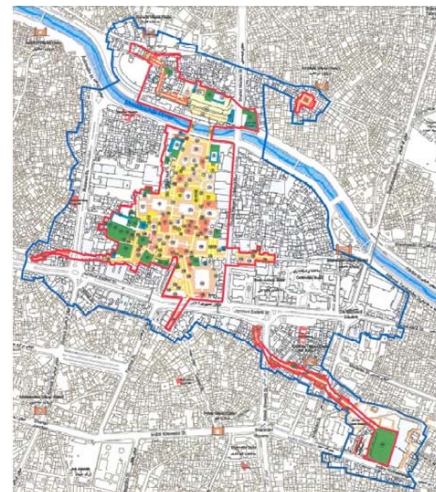


Figure 3. Bazaar of Tabriz

IV. METHODOLOGY

According to purposes of this research, it is a basic-applied, which uses the descriptive-analytical method. The main approach of this study is based on qualitative and quantitative data. Qualitative data were collected by library method, using different documents and indexing, and also observations of bodies in charge of urban elements of Iranian traditional city in four categories of 1-

Mosque (Friday and daily), 2- Citadel, 3- Residential Quarters and 4- Bazaar, (Tables 1 and 2). Some data were collected by field methods, interview and observation tools like quantitative data by giving value for compare bazaar sustainability in Isfahan and Tabriz which including socio-economic-environment aspect within the framework of economic environment and social environment (Table 3).

Table 1. Urban element of Iranian city (Isfahan and Tabriz)

Urban elements of Iranian city (Isfahan & Tabriz)		Location			Ownership			Degree of privacy			User			Control			Planned	
		city center	inner circle	periphery	public	private	institution	high	low	none	individual	groups	community	public	private	institution	public	private
Bazaar	Main																	
	neighborhood																	
Mosque	Friday																	
	daily																	
Citadels																		
Residential Quarters																		

Table 2. Urban element of Iranian city (Isfahan and Tabriz)

Urban elements of Iranian city (Isfahan & Tabriz)		Main tendency			Builder			Function				Services						
		public	private	institution	public	private	artisan	governmental	commerce	military	residential	individual	communal	fire protection	storm drainage	garbage	individual	communal
Bazaar	main																	
	neighborhood																	
Mosque	Friday																	
	daily																	
Citadels																		
Residential Quarters																		

Table 3. Comparison bazaar sustainability in Isfahan and Tabriz

		Isfahan					Tabriz				
		very high	high	medium	low	very low	very high	high	medium	low	very low
Environmental Sustainability	Prudent use of natural resources										
	Reduced use of the resources (energy, water, materials, and land) at stages in the life cycle of bazaar										
	Use of renewable and recyclable resources										
	Creation of healthy and nontoxic environment through the elimination of hazardous and toxic products in the indoor and exterior of the bazaar complex										
	Minimized air, land and water pollution										
	Use of environmentally friendly material										
Social Sustainability	Social self determination and cultural diversity										
	Being compatible with local community										
	Protection and promote of human health through a healthy and safe working environment.										
	Existence of mixed land uses in the bazaar complex that helps to social sustainability										
Economical Sustainability	Promotion of employment creation										
	Flexible design and reduced life-cycle cost of the bazaar										
	Use of fewer infrastructures in the bazaar because of the compactness of the complex										

V. MORPHOLOGY OF IRANIAN TRADITIONAL CITIES

Structure of Iranian traditional cities reveals a general rules in all those towns, bazaar, usually taking a linear shape, acted as the spinal column of city and continued towards the main gates of town (Figures 4 and 5). According to the concept of center point define it moves in time and creates the line [4]. And also passage ways were in fact branches of the linear bazaar which connected the city centre to neighborhood centre [15, 16].

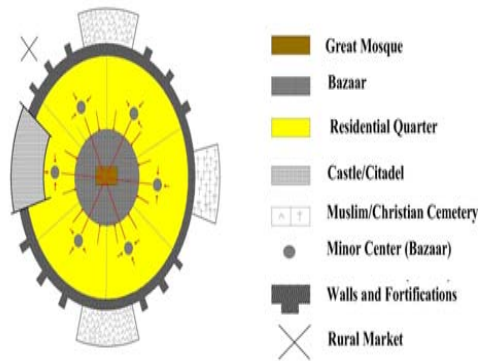


Figure 4. Iranian traditional cities source [21]

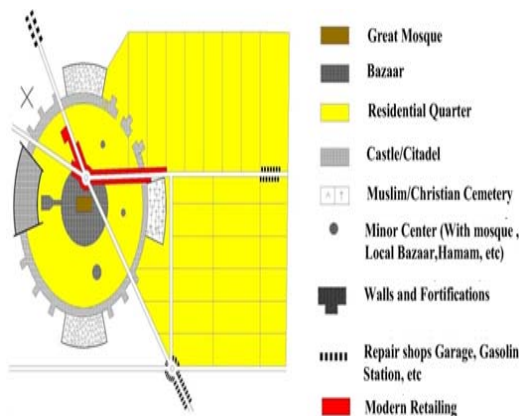


Figure 5. Model of modernized Islamic cities [24]

A. Great Mosque

It is located in the heart of the city and was usually surrounded by the bazaar as the case of central mosque (Masjed Jameh) in Isfahan. This was where the weekly Friday prayer were held and attached to it was the Madrassa providing religious and scientific teaching.

B. Citadel

Also known as Casbah, representing the palace of the governor, the citadel was surrounded by its own walls and constituted a district on its own with its own mosque, guards, offices, and residence. It was usually located in the high part of the town near the wall [20].

C. Residential Quarters

Surrounding these public structures were the residential areas, with high density and each quarter had its own mosque used only for daily prayers [21]. Quranic School (Madrassa), bakery, shops and other first

necessity objects. They even had their own gates which were usually closed at night after last prayers and opened early morning. They were also ethnically organized, Muslims grouped in quarters and Jews in others so that each group could practice and celebrate its own cultural beliefs.

D. Bazaar

Bazaar means a marketplace or assemblage of shops where miscellaneous goods and services are displayed to buy and sell [17]. The word "bazaar" refers to "Waaazar", which is an ancient Persian word [18]. In Iranian traditional city located outside the main mosque provided the economic activity in the town. Goods sold were usually spatially distributed corresponding to their nature. Sacred items such as candles, incenses and perfumes were sold close to the mosque as well as items that would be sold by booksellers and binders [19] while the rest of the goods were found at a further distance. The central area was also the gathering of other public activities such as social services, administration, trade, arts and crafts and baths.

There have been three types of bazaar in the cities of ancient Iran: periodic bazaar, urban bazaar and local bazaar urban bazaar was a popular urban space which could accommodate commercial activities as well as social and cultural activities of people. Architecturally speaking, urban bazaar is a covered public passageway which is surrounded by shops and stores in two sides. It was, therefore, a place for shopping, walking, social dialog, and cultural interaction of people. It has acted as the most important and influential public space in ancient cities and towns of Iran [17].

VI. SUSTAINABILITY OF BAZAAR IN ISFAHAN AND TABRIZ

Different activities and land uses are located in its structured architectural and urban context of both Isfahan and Tabriz bazaar. In Tabriz mass and open space are properly mixed together and bazaar central courtyards help to the regulation of air in interior space. The existence of green space and water open space, help to the sustainability of the complex and Hojres and shops are shaped around these spaces. Bazaar of Isfahan is including two parts old and the new bazaar, which is the main and important difference between Isfahan bazaar and Tabriz. In Isfahan organic growth of the old section in a linear that started from Old Square to Naghsh-e-Jahan square. After Comparison morphology of Iranian bazaars founded three types of bazaars (Figure 6):

- 1) Bazaar with connecting the gates
- 2) Bazaar as the major street of the city
- 3) Bazaar as the linear element in urban fabric

In each type of bazaars, public and governmental building of the, gates and major square are available. Tabriz bazaar has used natural resources prudently and reduced use of the resources renewable and recyclable resources have been used in bazaar. But both bazaars has created healthy and non-toxic environment. Air, land and water pollution are minimized by using vernacular and

environmentally friendly materials and giving the main access to people and not vehicles. But in Isfahan bazaar because of long distance of bazaar and air pollution is stand in lower rank to compare with Tabriz bazaar [22].

There is social self determination and cultural diversity in the bazaar and it is compatible with local community. It protects and promotes human health through a healthy and safe working environment. Mixed land uses in the bazaar complex helps to social sustainability also it helps to employment creation as

people work and create artifacts along with selling their products (Figure 7).

It has Flexible design and spaces are used for different and various purposes. Bazaar has appropriate infrastructures because of its compactness. There are three characteristics for sustainability of the bazaars used, environmental, social and economical and in below table compare the aspect of sustainably to Isfahan and Tabriz bazaars (Table 3).

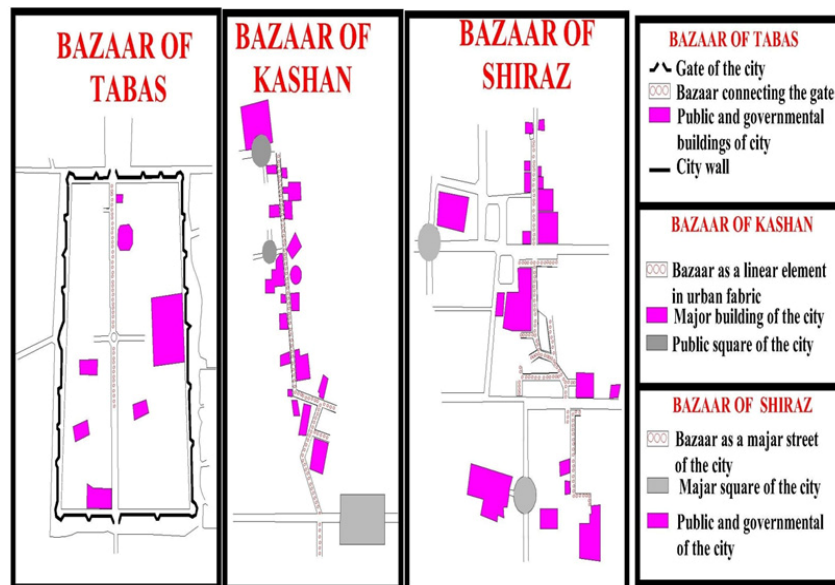


Figure 6. Morphology of the Iranian bazaar

VII. RESULTS AND DISCUSSIONS

- Prudent use of natural resources and reduced use of the resources (energy, water, materials, and land) at stages in the life cycle and in bazaar of Tabriz is more than Isfahan.
- Natural hazard like earthquake risk in Isfahan is much less to compare with Tabriz [23] but Tabriz is more successful in minimization of air, land and water pollution.
- Isfahan bazaar is located in heart of Iran in CBD of the city then cultural diversity and communication and tourism attraction is more than Tabriz bazaar.
- Mixed land uses in the both bazaars complex is very high, this issue helps to social sustainability, but both bazaars should focused on increasing the supply of parking facility.
- In Isfahan bazaar has been more attention to flexible design and reduced life-cycle cost of the bazaar.
- In both bazaars we have to avoid use of more infrastructures in the bazaar because of the compactness of the complex.
- Location of main bazaar in the cities is within walking distance in their particular neighborhoods.
- Except Friday mosque with public owner ship, all the elements of the Iranian traditional cities have private or institutional owner ship.
- The social organization of bazaars provided different groupings, individuals, small groups, and community.

VIII. CONCLUSIONS

In Iran, bazaar has played a significant role as the main element of traditional cities in Islamic era, and large numbers of these bazaars were formed in cities which were the capitals of Iran such as Isfahan, Tabriz and Shiraz. The second group was located in the Silk Road such as Tabas and Kashan. Today town planners and authorities pay attention to the bazaar as an important element in sustainable development planning because every city development planning in the world produces from its own urban elements.

This study with comparative the Isfahan and Tabriz bazaars, concludes that the main elements of the city have direct effect to the sustainability of bazaar, but as the result come bazaar sustainability in Isfahan and Tabriz which including socio-economic-environment aspect within the framework of Iranian traditional city, play the most important role to compare other elements. Because other elements were changed in different period of time but bazaar still has its own characteristics.

Consequently, this study suggests that firstly, structure of bazaar in the Iranian cities should keep as well as early periods. Secondly, sustainability of bazaar can be divided into three types: economic, social and environment the commercial that should be in the framework of Iranian traditional cities. By regarding bazaar structure and bazaar sustainability explanation of city development can be more successful.

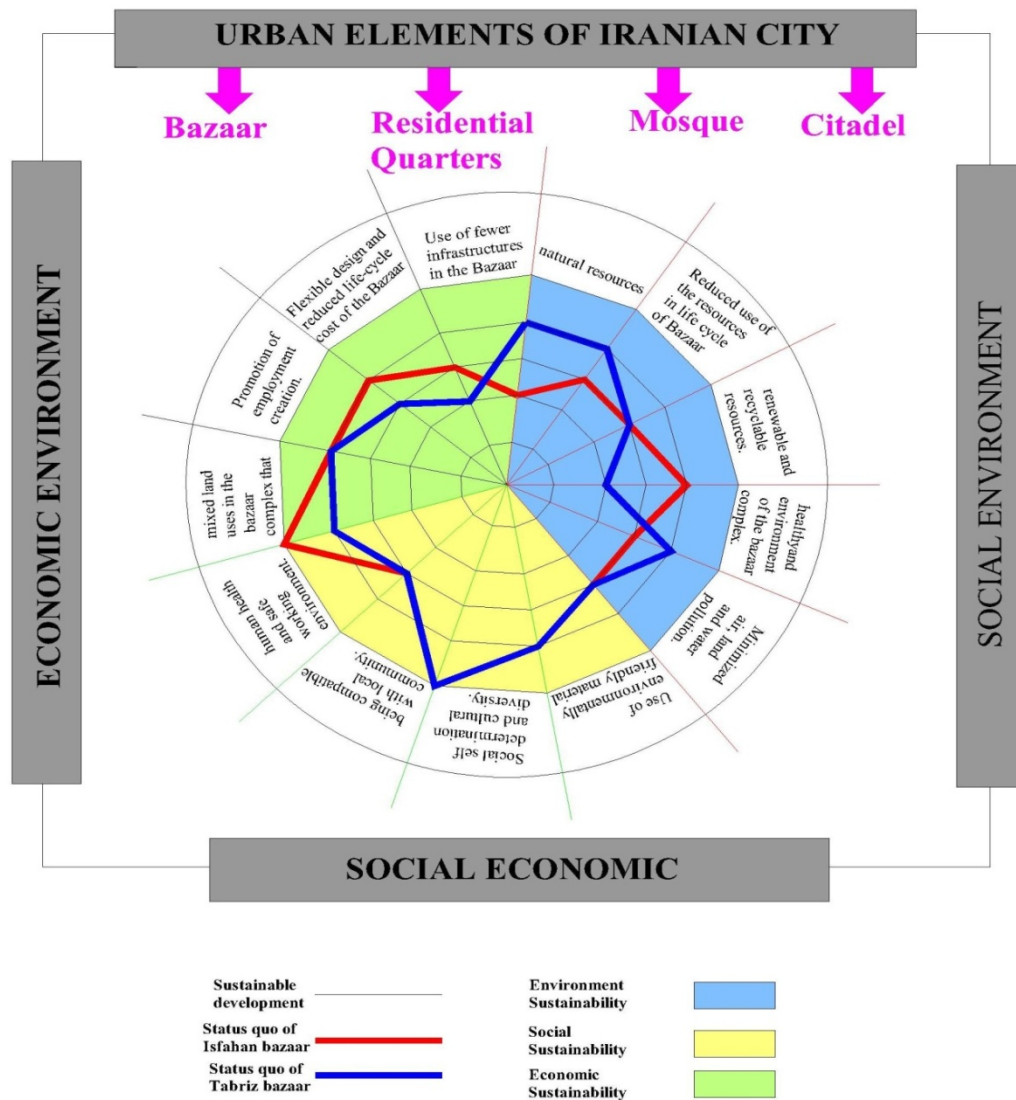


Figure 7. Sustainability of bazaar by urban element of the Iranian cities

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BIOGRAPHIES



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